CLAIM AMENDMENT

1. (currently amended) An instrument for measuring blood cell deformability comprising:

a disposable blood test kit (20) for directly containing blood sample,

a light emitting unit (10) disposed above said disposable blood test kit (20),

a measurement unit (30) for measuring the blood cell deformability,

said disposable blood test kit (20) comprises a blood sample pot (21) for containing the blood sample, a slit channel (22) for flowing the blood sample by a pressure difference, and a waste blood pot (23) for collecting the tested blood sample,

said measurement unit (30) comprises a differential pressure generator (33), which is connected to the disposable blood test kit (20) through a connecting tube and a valve (32) for generating the pressure difference between the blood sample pot (21) and waste blood pot (23), a pressure gauge (34) connected to the differential pressure generator (33) and the disposable blood test kit (20) for measuring the pressure difference, a screen (31) for projecting [[the]] diffracted images of the blood cell, an image capturing unit (35) for capturing the diffracted images, a control unit (36) for calculating the blood cell deformability, variation of [[the]] a shearing force, and deformation [[in]] on time based [[on]] data received from the pressure gauge (34) and the image capturing unit (35), an output unit (37) for printing the calculated information on a sheet or displaying on an LCD screen, and a memory unit (38) for storing the calculated information and images,

wherein said control unit (36) calculates the blood cell deformability and shearing force as a function of time according to pre-calculated data, which are calculated and stored by a computer analyses on time based data of the captured image and pressure measurement, with or without [[instead of]] applying instantly measured pressure data, and the diffracted images of the blood cells captured by the image-capturing unit (35) are analyzed by ellipse

curve-fitting computer software to determine the length (L) and width (W) of the analyzed elliptic images, and calculating the Deformation Index (DI) for determining the blood cell deformability and shearing force as a function of time.

2. (currently amended) An instrument for measuring blood cell deformability as claimed in claim 1, wherein said differential pressure generator (33) is connected to the waste blood pot (23) of the disposable blood test kit (20) through a connecting tube and a valve (32) for generating vacuum [[(negative)]] pressure, negative pressure, at the waste blood pot (23), so that the blood sample flows toward the waste blood pot (23) through the slit channel (22).

3. (previously amended) An instrument for measuring blood cell deformability as claimed in claim 1, wherein said differential pressure generator (33-1) is connected to the blood sample pot (21) of the disposable blood test kit (20) through a connecting tube and a valve (32) for generating positive pressure at the blood sample pot (21), so that the blood sample flows toward the waste blood pot (23) through the slit channel (22).

4. (original) An instrument for measuring blood cell deformability as claimed in claim 1, wherein said slit channel (22) is optically transparent and has a clearance with a rectangular shape.

5. (currently amended) An instrument for measuring blood cell deformability as claimed in claim 1, wherein said disposable blood test kit (20) is made of a transparent material, [[which is a]] such as silicon, silica, quartz, glass, a polymer workable by a laser, an extruded polymer or ceramics.

6. (currently amended) An instrument for measuring blood cell deformability as claimed in

claim 1, further comprises a heat control device, which is a thermo-electric component, a temperature control block, [[or]] a hot-cold water jacket, or a halogen-lamp for adjusting and maintaining constant testing temperature surrounding the disposable blood test kit.

7. (currently amended) An instrument for measuring blood cell deformability as claimed in claim 1, wherein said image capturing unit (35) enables capturing the diffracted images of the deformed blood cell [[by projecting]] projected on the screen.

8. (previously amended) An instrument for measuring blood cell deformability as claimed in claim 1, wherein said image capturing unit (35) enables directly capturing the diffracted images of the deformed blood cell without projecting on the screen.

9. (currently amended) An instrument for measuring blood cell deformability as claimed in claim 1, wherein said image capturing unit (35) [[could use]] can be adopted either a CCD sensor array, CCD camera, digital camera, web camera or video camera for capturing images.

10. (original) An instrument for measuring blood cell deformability as claimed in claim 1, wherein said light-emitting unit (10) is adopted as either a Laser Diode or Light Emitting Diode (LED).